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 AGGATCACAAATGAGATCTTCTGGATGCGTATGAGAACTCCACCTCCACAGAGTTTATCAGCCTGGCCAGCCAGGTGAAGGAGGC
 GCTGAAGCTGCTGTACAATGAAGTCCCTGTCTGGGTCCCTACCACAAGAAGTCGGCTGTAACTGCCTTCAGTGAGGGCAGTGTCA
 TCGCTACTACTGGTCAGAGTTTACGATCCCCCACACCTGGCAGAAAGAGTTGATCGCGCCATGGCTGTGGAGCGAGTTGTAACA
 TTGCCACCCCGAGCAGGGGCACTGAAATCCTTCGTGCTAACATCTGTGGTGGCTTCCCATTTGACCCCAAGATGCTGCAGAGGAC
 TCAGGACAACAGCTGCAGTTTTTGCCCTGCATGCCATGGTGCAGCAGTGACAGCTTCACTACCCCTGGCTTCCCAACAGTCCCT
 ACCCGGCGCATGCCCGCTGCCAGTGGGTCTGCGGGGGGACGCCGACTCTGTGCTGAGCCTCACCTTCCGAAGCTTTGATGTGCT
 CCCTGTGATGAGCATGGCAGTGACCTGGTCACCGTGTATGATAGCCTGAGCCCCATGGAACCCACGCTGTGGTGGCGCTGTGTGG
 CACCTTCTCACCTCTTACAACCTGACTTTCCTCTCTCCAGAACGCTTTCCTTGTACGCTGATAACCAATACTGACCGGCGAC
 ATCTGGCTTTTGAGGCCACTTCTTCCAGCTGCCCAAGATGAGCAGCTGTGGCGGCTTTTTGAGTGACACCCCAAGGGACATTTAGC
 AGCCCCACTATCCAGGCCACTACCCGCCCAACATCAACTGCACATGGAATATCAAGGTGCCCAACAACCGGAACGTGAAGGTGCG
 CTTCAAACCTCTTCTATCTGGTGGACCCCAACGTACAGTGGGCTCTGACCAAGGACTATGTGGAGATCAACGGGGAGAAGTACT
 GCGGTGAGAGGTCCAGTTTTGTGGTGGAGCAGCAACAGCAGCAAGATTACAGTCCACTTCCATTCTGATCACTCGTACACGGACACC
 GGGTTCCTAGCTGAGTACCTCTCTACGACTCCAACGACCCGTGCCCAGGGATGTTTATGTGCAAGACTGGACGGTGCATCCGAAA
 GGAACGCGCTGCGACGGCTGGGCAGACTGCCCGGATTATAGTGATGAGCGTTACTGCCGATGCAATGCCACCCACAGTTTACGT
 GCAAAAACCCAGTTCTGCAAGCCCTCTTCTGGGTCTGTGACAGTGTCAACGACTGTGGGGACGGAAGTGACGAGGAGGGCTGCAGC
 TGTCTGCTGGGAGTTTCAAGTGTTCATGGGAAGTGTCTCCCTCAGAGCCAGAAGTGTAATGGGAAGGACAAGTGTGGAGATGG
 GTCTGACGAGGCTTCATGTGACAGCGTGAATGTGCTCTTGCACCAATATACCTACCGCTGCCAAAATGGCTCTGTCTGAGCA
 AGGGCAACCCCTGAGTGTGATGGGAAGACGGACTGTAGCGATGGCTCCGATGAGAAAACTGTGACTGTGGGCTGCGATCTTTACC
 AAACAGGCTCGCGTGGTGGTGGGACGAATGCCGACGAGGGCGAGTGGCCCTGGCAGGTGAGCTCCACGCCCTGGGCCAGGGCCA
 CTTGTGTGGGGCTCGCTCATCTCTCTGACTGGCTGGTCTCTGACGCTCATTGCTTTTCAAGATGACAAAAATTTCAAGTACTCAG
 ACTACAGGATGTGGACGGCTTCTTGGGTCTGCTGGACAGAGCAAGCGCAGTGCCTCTGGGGTGACGAGCTGAAGCTCAACGT
 ATCATCACCCACCTTCCCTTCAATGATTTTCACTTCGACTATGACATCGCCTTGTGAGCTGGAGAGTGGAGAGTGGAGTACAGCAC
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 AAAAAAAAAA (SEQ ID NO:1)

MGSNRGRKAGGSQDFGAGLKYSRLENMNGFEEGVEFLPANNA
 KKVEKRGPRRWVVLVAVLFSFLLLSLMAGLLVWHFHYRNVQKVFNGHLRITNEIFL
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 I PPHLAEEVDRAVERVVTLP PRARALKSFVLT SVVAFPIDPRMLQRTQDNSCFAL
 HAHA AVTRFTTPGF PNPYP AHARCQWVLRGDADSVLSLTFRSFVAPCDEHGS DLV
 TVYDSLSPMEPHAVVRLCGTFSPSYNL TFLSSQNVFLVTLITNTDRRHPGF EATFFQL
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 EWPWQVSLHALGQGHLCGASLISPDLVSAAHCFQDDKNFKYSYDTMTWTAFLGLLDQS
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 DSCQGDSSGGLSSAEKDRMFQAGVVSWECEGAQRNKPVGVTPLPVVRDWIKEHTGV
 (SEQ ID NO:2)

FIGURE 1

underlined = deleted in targeting construct

[] = sequence flanking Neo insert in targeting construct

CATGGTAGACGGCTGCCCCGGAGGGACCACGCGTCTGAGACCGGCGATCGGACCGCCAAAA
CCATGGGTAGCAATCGGGGCCGCAAGGCCGGAGGGGGCTCTCAGGACTTCGGCGCGGGAC
TCAAGTACAACCTCCCGCTAGAGAACATGAATGGCTTTGAGGAGGGTGTGGAGTTCTCTGC
CTGCGAACAAATGCCAAGAAAGTGGAGAAGCGAGGCCCCAGGCGCTGGGTGGTGTGGTGG
CAGTGCTGTTTCAGCTTCTCTTGCTCTCCCTCATGGCTGGCTTGCTGGTGTGGCACTTCC
ATTATCGGAATGTGCGGGTTCAAAAAGTCTTCAATGGCCATCTGAGGATCACAAATGAGA
TCTTTCTGGATGCGTATGAGAACTCCACCTCCACAGAGTTTATCAGCCTGGCCAGCCAGG
TGAAGGAGGCGCTGAAGCTGCTGTACAATGAAGTCCCTGTCTGGGTCCCTACCACAAGA
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TCCGAAGCTTTGATGTCGCTCCCTGTGATGAGCATGGCAGTGACCTGGTCACCGTGTATG
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TGCCTTCAAACTCTTCTATCTGGTGGACCCCAACGTACCAGTGGGCTCTTGCACCAAGG
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GCAACAGCAGCAAGATTACAGTCCACTTCCATTCTGATCACTCGTACACGGACACCGGGT
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ACCAGAGCAAGCGCAGTGCCTCTGGGGTGCAGGAGCTGAAGCTCAAACGTATCATCACCC
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CGGTGGAGTACAGCACCGTCTGCGCCCCATCTGCCTGCCTGATGCTACCCATGTCTTCC
CTGCTGGCAAGGCCATCTGGGTACAGGCTGGGGGCACACAAAAGAGGGAG [GTACCGGA
GCGCTGATCCTGCAGAAGGGTGAATCCGTGTCTCATCAACCAGACCACCTGTGAGGACCTC
ATGCCGCAGCAGATCACCCACGAATGATGTGTGTGGGTTTCTCAGTGGGGGTGTGGAC
TCCTGC] CAGGGTGACTCTGGTGGCCCCCTTGTCAAGCGCGGAGAAAG [ATGGGCGAATGT
TCCAGGCTGGTGTGGTGAGCTGGGGTGAAGGCTGCGCTCAGAGGAACAAGCCAGGCGTGT
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GACAGACAGCCGACCACAAACACCCACAGGGATGCCCGACATGCACACCTGGATACAGGA
GAGGAACACTGACGACATTTATGCTGTGGCCTCCCCCCCCCAACACAACCCAGACTGTGA
ACTGCATCCTTAGGACTCAGAGTTCTTCCAAAGTGGGACCCCCCTCAAGAGTTGGAGAGAG
AACTTGCGTGTCTAGCGGCCCCAGCCTGGGGGCAAGGGTTTGTATGGCAGCCTTCCCCCTCTA
GCCCTGAGCTGGGTGAAGATGATGCTGTCCCGAGAGCTGCTTCCAACGTGTCATTGAGCT
CCCGGGAGCCCTATGGGAGGAGGGGCTCAGGGTCACTCTTTTCAGGAAGCGCCAGCCCTA
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GTATTTGAGAGTAAACATTTTATTTCTTTTAAAAAAAAAAAAAAAAAAAAA

FIGURE 2A

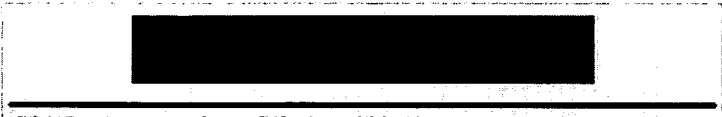
Gene Sequence Structure
*

2466 bp

Sequence Deleted

2505 bp

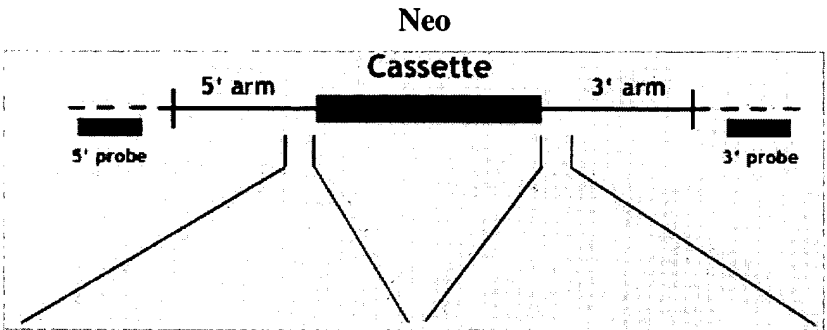
Size of full-length
cDNA: 3106 bp



Targeting Vector* (genomic sequence)

Construct Number: 2035

Arm Length:
5': 3.8 kb
3': 1 kb



<p>5' >TTCCCCATTGAGACTGGCTTA CCCCGGAAGCTGCCTGCCTCAGTC TCCCGCTTCCTGTCTCCCCAGGTA CCGGAGCGCTGATCCTGCAGAAGG GTGAGATCCGTGTCATCAACCAGA CCACCTGTGAGGACCTCATGCCGC AGCAGATCACCCACGAATGATGT GTGTGGGTTTCCTCAGTGGGGGTG TGGACTCCTGC<3' (SEQ ID NO:2)</p>	<p>5' >ATGGGCGAATGTTCCAGGCTG GTGTGGTGGGCTGGGGTGAAGGCT GCGCTCAGAGGAACAAGCCAGGCG TGTACACAAGGCTCCCTGTAGTTC GGGACTGGATCAAAGAGCACACTG GGGTATAGCAGCATGGACAGACAG CCGACCACAAACACCCACAGGGAT GCCCCGACATGCACACCTGGATACA GGAGAGGGACA<3' (SEQ ID NO:3)</p>
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Targeting Vector
Endogenous Locus

* Not drawn to scale

FIGURE 2B